

REMARKS

In the Office Action of June 8, 2007, claims 1-10 were rejected under 35 U.S.C. 102(a) as being anticipated by the pre-grant publication of Bode, U.S. Pat. Pub. No. 2003/0021922.

Claims 1-9 were also rejected were rejected under 35 U.S.C. 102(a) as being anticipated by the pre-grant publication of Echols et al., U.S. Pat. Pub. No. 2002/000178582.

In addition, claims 1, 2, 5, 6 and 8 were also rejected under 35 U.S.C. 102(b) as being anticipated by Rouse, U.S. Pat. No. 6,158,507.

In reply to this action, an amendment to the claims is submitted herewith, in which claim 8 has been cancelled without prejudice, claims 1, 5, 6, 7, 9 and 10 have been amended and new claims 11-14 have been submitted to more particularly point out and distinctly claim the features of the invention which distinguish from the prior art.

Claim 1 has been amended to recite that the cover around the outer stand-off layer is a collapsible outer cover. The support for this amendment is found throughout the application as filed at, for example, page 10, lines 20 to 25 of the international application as published.

Claim 1 has been further amended to recite that the cylindrical outer stand-off layer has a construction which is more rigid than a construction of the filter layer. The support for this amendment is found in the application as filed at, for example, page 10, lines 9 and 10 of the international application as filed.

Corresponding amendments have been made to claims 5, 6, 9 and 10. Because of the amendment to claim 6, claim 8 is cancelled.

New claims 11 to 14 are added. Basis is found in the application as filed for these amendments and no new matter is

entered.

Any subject matter deleted by way of these amendments is not to be considered abandoned and Applicants reserve the right to add any deleted subject matter at a later stage in the proceedings, if necessary for patentability.

Amended Claim 1 is deemed to be clearly patentable over the cited prior art for the following reasons.

1) US Pat. Pub. No. 2003/0021922 of Bode does not disclose the following features of claim 1 as amended:

a) a well screen having an outer stand-off layer arranged to resist collapse of the cover towards the filter layer;

b) an outer stand-off layer which is more rigid than the filter layer; or

c) a collapsible outer cover around the outer stand-off layer.

Concerning feature a), the findings in the Office Action read the outer stand-off layer of the present claim 1 on the drainage mesh 21 of Bode. Claim 1 has now been amended to recite that the stand-off layer is arranged to resist collapse of the cover towards the filter layer. There is no disclosure in Bode that the mesh material of Bode is arranged to resist collapse of the cover towards the filter layer. In Bode, it is the outer perforated member 22 that is constructed to resist collapse. Referring to paragraph 29 of Bode:

"As shown in FIG. 3, the outer perforated member 22 provides a protective layer for the internal components, namely filter mesh 18 and 20 and drainage mesh 17, 19, and 21. The outer member 22 should be constructed with a sufficient wall thickness to withstand the down hole radial pressures in the well, including pressure created by collapsing walls of the wellbore"

Thus, the assumption in paragraph 3 of the Office action that

the stand-offs of Bode are arranged to resist collapse of the cover 22 towards the filter is not accurate. Specifically, the cover of Bode is designed not to collapse, regardless of the pressure in the wellbore. The stated objective of the cover (outer member 22) is to withstand radial pressures in the well, including those of collapsing walls which by its very nature would be a pressure of tremendous force. Thus, Bode provides no disclosure of feature a) above, that the outer stand-off layer is arranged to resist collapse of a collapsible outer cover towards the filter layer.

Further, as a logical consequence of this, Bode provides no disclosure of feature c) above, that of a collapsible outer cover around the other stand-off layer.

Yet further, Bode provides no disclosure of the feature of claim 1 as amended, that the cylindrical stand-off layer has a construction which is more rigid than a construction of the filter layer. Therefore, amended claim 1 is seen as novel over Bode.

US Pat. Pub. No. 2002/0178582 to Echols et al. ("Echols") does not disclose the following features of claim 1 as amended:

a) a well screen having an outer stand-off layer arranged to resist collapse of the cover towards the filter layer;

b) an outer stand-off layer which is more rigid than the filter layer; or

c) a collapsible outer cover around the outer stand-off layer.

Referring to paragraph 30 of Echols, we note that shroud 42 (which, we understand, the Examiner equates to the cover of the present claim 1) "provides radial support to prevent collapse of the wellbore". Thus, shroud 42 is designed not to collapse and, therefore, coarse filter layer 48 (which the Office Action equates to the outer stand-off layer of the present claim 1) cannot be considered to be an outer stand-off layer arranged to resist collapse of the cover towards the filter layer. Thus, Echols does not disclose features a) or c) above.

Further, Echols provides no disclosure of feature b) above. As set out in paragraph 32 of Echols, the filter layers are defined only in terms of being "fine" or "coarse". Layer 48 is defined as being "coarse" in terms of an indication of the relative size of particles permitted to pass through the layer. Thus, claim 1 as amended is clearly novel over Echols.

3) US 6,158,507 to Rouse et al. ("Rouse") does not disclose the following features of claim 1 as amended:

a) a well screen having an outer stand-off layer arranged to resist collapse of the cover towards the filter layer;

b) an outer stand-off layer which is more rigid than the filter layer; or

c) a collapsible outer cover around the outer stand-off layer.

Referring to col. 3, lines 9 to 22, Rouse discloses that a sleeve 28 of braided ceramic fibers has a tension applied to it causing it to contract and move into tight engagement with the woven fabric of layer 22. Further, a shroud 34 is positioned over braided ceramic cloth sleeve 24 to protect the two membranes 22, 23.

Comparing this disclosure with claim 1 as amended:

a) sleeve 28 cannot be considered as being arranged to resist collapse of the shroud towards membranes 22, 23; sleeve 28 is in tight engagement with layer 22 for the purpose of holding the membranes on the base pipe (col. 3, lines 19-21) and, thus, cannot be considered to resist collapse of the shroud;

b) sleeve 28 is positioned over the sleeve 24 under tension; this is not a disclosure of an outer stand-off layer which is more rigid than the filter layer; and

c) there is no disclosure that shroud 24 is collapsible; indeed, the disclosure of Rouse seems to be the opposite, as shroud 34 is provided for the purpose of protecting membranes 22, 23.

Thus, claim 1 as amended is clearly novel over Rouse.

As to nonobviousness, Claim 1 is sufficiently far removed from the prior art documents so that it appears no detailed consideration of nonobviousness of the claim seems to be required. However, we comment as follows.

The cover of Bode is designed specifically not to collapse; see paragraph 9. Thus, the person skilled in the art, seeking to arrive at claim 1 having an outer stand off layer arranged to resist collapse of the cover, has no motivation to consult with Bode. Even if the person skilled in the art did consult with Bode, Bode provides a specific teaching contrary to claim 1 in that the cover is non-collapsible. Thus, Bode is entirely irrelevant to claim 1 as amended.

Further, Bode provides neither teaching nor suggestion for the provision of a stand-off layer which is more rigid than a filter layer.

We submit that claim 1 is nonobvious over Bode.

Again, Echols appears to be significantly removed from claim 1 as amended. The cover of Echols is designed specifically not to collapse; collapse of the cover simply is not contemplated. Thus, Echols does not even contemplate problems which the claimed subject matter provides a solution to: the requirement for a stand-off layer to resist collapse of a cover, and of a stand-off layer which is more rigid than the filter layer.

Thus, claim 1 as amended is clearly nonobvious over Echols.

Similarly, Rouse does not contemplate the issues which the well screen of the present claim 1 addresses. Thus, Rouse provides neither hint, teaching or suggestion of the need for features a), b) or c) above. We submit that claim 1 is clearly nonobvious over Rouse.

There appears to be no motivation whatsoever for the person skilled in the art to combine any of the cited prior art documents and, thus, claim 1 is nonobvious over any such combination. Indeed,

any such combination fails to disclose all features of claim 1 as amended.

Thus, claim 1 is novel and nonobvious over all prior art.

The other independent claims, claims 5, 6, 9 and 10, are patentable over the cited references for at least the same reasons as claim. The dependent claims are all patentable for at least the same reasons as the independent claims from which they depend.

New claims 11 to 14 limit the independent claims further. None of the prior art documents disclose or suggest an outer stand-off layer formed from orthogonally disposed metal rods. Nor does the prior art disclose that these metal rods allow a spacing of between 2.5 mm and 3 mm. In all the cited prior art documents, the "stand-off layers" are either filter layers or a layer of braided ceramic fibers.

Further, none of the prior art documents disclose the feature of claims 13 and 14: a perforated metal sheet. Indeed, for example, Bode teaches away from this by stating that the shroud 22 must be of sufficient thickness to withstand radial pressures in the well. Echols and Rouse also teach that the shroud/cover is of sufficient thickness either to protect layers inside the shroud/cover or explicitly to withstand radial pressures by not deforming.

Thus, the new dependent claims also define further novel and inventive features.

CONCLUSION

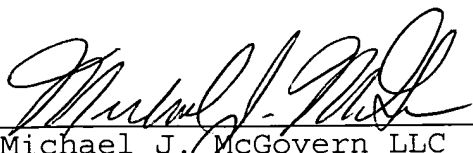
In view of the amendment and remarks, reconsideration of the application is respectfully requested. After the amendment, claims 1-7 and 9-14 are now pending and a Notice of Allowance for these claims is respectfully requested.

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U.S. Pat. Appl. No. 10/560,914
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No fee for extra claims is believed to be due, but in the event that any fee is deemed to be due, please charge Boyle & Fredrickson Deposit Account No. 50-1170.

Respectfully submitted,

By: _____


Michael J. McGovern LLC
Pat. Office Reg. No. 28,326
Boyle Fredrickson S.C.
840 North Plankinton Avenue
Milwaukee, WI 53203
(414) 225-6317
Attorney of Record